DRIVING LICENSE SYSTEM

#include <stdio.h>

#include <stdlib.h>

#include <string.h>

// Define a structure for storing user information

struct User {

char username[20];

char password[20];

};

// Define a structure for storing driving license information

struct DrivingLicense {

char name[50];

char address[100];

char licenseNumber[15];

};

// Function to perform user registration

void registerUser(struct User \*users, int \*numUsers) {

if (\*numUsers < 10) {

printf("Enter new username: ");

scanf(" %s", users[\*numUsers].username);

printf("Enter new password: ");

scanf(" %s", users[\*numUsers].password);

(\*numUsers)++;

printf("Registration successful!\n");

} else {

printf("Maximum limit reached. Cannot register more users.\n");

}

}

// Function to perform user authentication

int authenticateUser(struct User \*users, int numUsers, char \*loggedInUser) {

char username[20];

char password[20];

printf("Enter username: ");

scanf(" %s", username);

printf("Enter password: ");

scanf(" %s", password);

// Check if the entered username and password are valid

for (int i = 0; i < numUsers; i++) {

if (strcmp(username, users[i].username) == 0 && strcmp(password, users[i].password) == 0) {

printf("Login successful!\n");

strcpy(loggedInUser, username); // Set the logged-in user

return 1; // Authentication successful

}

}

printf("Invalid username or password. Login failed.\n");

return 0; // Authentication failed

}

// Function to add a new driving license to the system

void addLicense(struct DrivingLicense \*licenses, int \*numLicenses, char \*loggedInUser) {

if (\*numLicenses < 100) {

printf("Enter name: ");

scanf(" %[^\n]s", licenses[\*numLicenses].name);

printf("Enter address: ");

scanf(" %[^\n]s", licenses[\*numLicenses].address);

printf("Enter license number: ");

scanf(" %s", licenses[\*numLicenses].licenseNumber);

// Include the username of the logged-in user in the driving license information

printf("Driving license added successfully for user %s!\n", loggedInUser);

(\*numLicenses)++;

} else {

printf("Maximum limit reached. Cannot add more licenses.\n");

}

}

// Function to update driving license information

void updateLicense(struct DrivingLicense \*licenses, int numLicenses, char \*loggedInUser) {

char licenseNumber[15];

printf("Enter license number to update: ");

scanf(" %s", licenseNumber);

for (int i = 0; i < numLicenses; i++) {

if (strcmp(licenseNumber, licenses[i].licenseNumber) == 0 &&

strcmp(loggedInUser, licenses[i].name) == 0) {

printf("Enter updated name: ");

scanf(" %[^\n]s", licenses[i].name);

printf("Enter updated address: ");

scanf(" %[^\n]s", licenses[i].address);

printf("Driving license updated successfully!\n");

return;

}

}

printf("License not found or you do not have permission to update.\n");

}

// Function to display all driving licenses in the system

void displayLicenses(struct DrivingLicense \*licenses, int numLicenses) {

printf("\nList of Driving Licenses:\n");

for (int i = 0; i < numLicenses; i++) {

printf("Name: %s\n", licenses[i].name);

printf("Address: %s\n", licenses[i].address);

printf("License Number: %s\n", licenses[i].licenseNumber);

printf("------------------------\n");

}

}

int main() {

struct User users[10]; // Array to store user information

struct DrivingLicense licenses[100]; // Array to store driving licenses

int numUsers = 0; // Variable to track the number of registered users

int numLicenses = 0; // Variable to track the number of licenses in the system

char loggedInUser[20] = ""; // Variable to store the username of the logged-in user

int mainChoice, authChoice;

do {

printf("\nMain Menu:\n");

printf("1. Register\n");

printf("2. Login\n");

printf("3. Exit\n");

printf("Enter your choice: ");

scanf("%d", &mainChoice);

switch (mainChoice) {

case 1:

registerUser(users, &numUsers);

break;

case 2:

authChoice = authenticateUser(users, numUsers, loggedInUser);

if (authChoice) {

int choice;

do {

printf("\nDriving License System Menu:\n");

printf("1. Add new license\n");

printf("2. Update license information\n");

printf("3. Display all licenses\n");

printf("4. Logout\n");

printf("Enter your choice: ");

scanf("%d", &choice);

switch (choice) {

case 1:

addLicense(licenses, &numLicenses, loggedInUser);

break;

case 2:

updateLicense(licenses, numLicenses, loggedInUser);

break;

case 3:

displayLicenses(licenses, numLicenses);

break;

case 4:

printf("Logging out.\n");

break;

default:

printf("Invalid choice. Please try again.\n");

}

} while (choice != 4);

}

break;

case 3:

printf("Exiting program.\n");

break;

default:

printf("Invalid choice. Please try again.\n");

}

} while (mainChoice != 3);

return 0;

}